

CLAIMS

1. A method of protecting a solid-state protein from ionizing radiation which comprises
5 combining said protein with a radiation-protecting amount of a methoxysalicylaldehyde derivative prior to exposing said protein to said ionizing radiation.
- 10 2. A method according to claim 1 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.
- 15 3. A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with radiation-protecting amounts of a methoxysalicylaldehyde derivative and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid prior to exposing said protein to said ionizing radiation.
- 20 4. A method according to claim 3 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.
5. A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with radiation-protecting amounts of a methoxysalicylaldehyde derivative and isopropanol prior to exposing said protein to said ionizing radiation.
- 25 6. A method according to claim 5 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.
7. A formulation comprising a solid-state protein and a methoxysalicylaldehyde derivative.
- 30 8. A formulation according to claim 7 wherein said protein is a drug.
9. A formulation according to claim 7 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

10. A formulation according to claim 7 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation.
11. A formulation according to claim 10 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation.
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12. A formulation comprising a solid-state protein, a methoxysalicylaldehyde derivative, and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.
- 10 13. A formulation according to claim 12 wherein said protein is a drug.
14. A formulation according to claim 12 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.
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15. A formulation according to claim 12 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation, and said 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid comprises at least about 0.1% by weight of said formulation.
- 20 16. A formulation according to claim 15 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation, and said 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid comprises from about 0.1% to about 1.0% by weight of said formulation.
- 25 17. A formulation comprising a solid-state protein, a methoxysalicylaldehyde derivative, and isopropanol.
18. A formulation according to claim 17 wherein said protein is a drug.
- 30 19. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

20. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation, and said isopropanol comprises at least about 0.1% of said formulation.

5 21. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation, and said isopropanol acid comprises from about 0.1% to about 4.0% of said formulation.

10 22. A composition comprising a methoxysalicylaldehyde derivative and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.

23. A composition according to claim 22 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

15 24. The use of said composition of claim 22 in pharmaceutical formulations as a radioprotectant.